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**From:** Gullett, Brian  
**Sent:** Fri 8/12/2016 12:16:57 PM  
**Subject:** RE: NASA EPA Collaboration - Radford Virginia.  
QAPP Radford edits BG2 08-04-2016.docx

Hi, Ron.

I'm glad to hear that your Samoa flights went well.

I've attached the current version of the Quality Assurance Project Plan which is awaiting comments from Radford Army Ammunition Plant and their contractor, BAE. This has some logistical information within.

Google Earth shows the location of the eight pairs of burn pans at

37°11'31.59"N 80°31'27.58" W elev. 1701 ft bordered on the north by a ridge line of trees and the south by the New River.

We'll be commencing test flights the morning of Monday, September 19. Because the burns are of such short duration (perhaps 60 seconds) we'll need to sample as much as possible to hopefully exceed analyte detection limits so it's important to be coordinated between observers and the pilot. As planned, we'll sample for two weeks, ending Friday, September 30<sup>th</sup>, breaking for the weekend between. Weather permitting, we'll sample every day. I believe that typically their burns are in the morning and I'd anticipate we'll have around three to four flights of 3-5 min duration each. The linear distance between the first and last pan is less than 500 m and the distance to the river and ridge line is 50-100 m. The likely pilot location is at the group of small buildings to the east of the burn pans. Hopefully Radford will be able to arrange an observer location orthogonal to the line of pans to better enable positioning of the UAS within the plume. Likely the furthest range of the UAS from the pilot would be with an easterly wind, perhaps 750 m at most. The shortest range of the UAS would be a north or south wind, boundaries being the trees on the ridge to the north and the south side of the river to the south (unless the land across

the river is Army land, I'm not sure). I don't have a wind rose for the September timeframe; the Jan/Feb windrose for the New River Valley Airport had about 50% of the winds out of the WSW – WNW.

We likely will be staying at the Holiday Inn Christiansburg/Blacksburg located at 99 Bradley Dr., Christiansburg, VA 24073, 540-381-8100. I've stayed there before and it's convenient, perhaps a 10 min ride from RFAAP.

I'd like to arrange a conference call but am waiting to receive feedback from RFAAP and BAE on their QAPP comments and availability.

Let me know if you have any further questions and don't hesitate to call.

Brian

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**From:** Instrella, Ron (ARC-SG)[Bay Area Environmental Research Institute]  
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**Sent:** Thursday, August 11, 2016 2:49 PM  
**To:** Gullett, Brian <Gullett.Brian@epa.gov>  
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**Subject:** NASA EPA Collaboration - Radford Virginia.

Hi Brian,

I hope you're doing well. Our group recently returned from a successful mission with our aircraft in Ofu, American Samoa, and are now shifting gears to prepare for our upcoming gas sensor testing in Radford. Over the next two weeks, our team will finish preparing the gas sensor payload interface for our aircraft. I am wondering whether you could provide information about trip logistics to help us prepare. As of now, I understand that our group will **travel starting the week of September 19th**.

A few questions on our end: How many days of flights do you envision we'll need to collect the necessary data? Could this be done **between the 19th and 23rd (5 days)**? I'd also like to get some information about the range to get an idea of prospective flight paths. You might have included this in a previous email with the flight quality assurance plan, but let me know if you have any updated as well.

Let me know if you'd like any additional information from our end as well. Looking forward to this collaboration. Thanks again.

Regards,

Ron

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